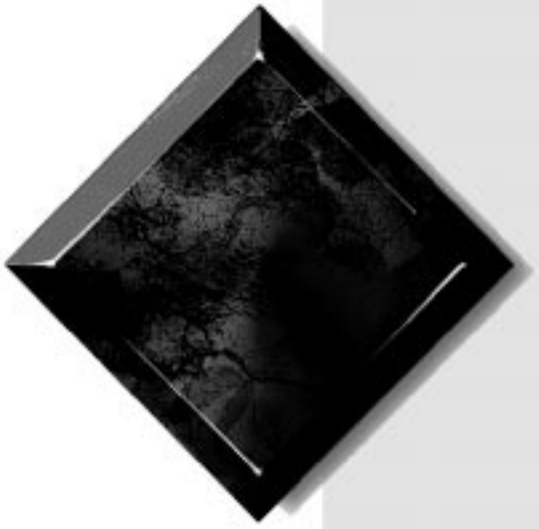

Gateway ALR 8200 User's Guide

Part #8504078 A MAN SYS US 8200 USR GDE R2 12/98

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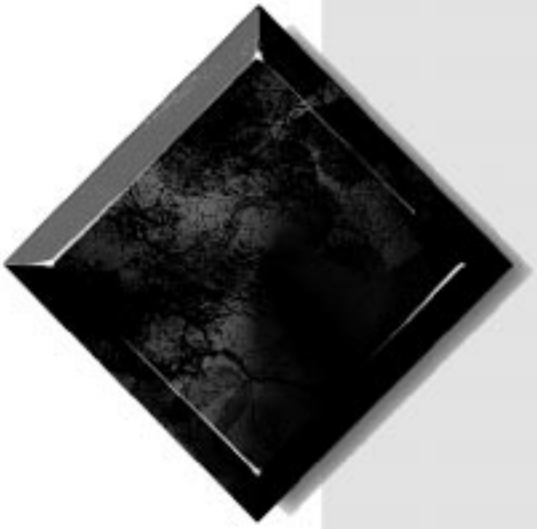

Preface

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About this guide

The purpose of this User's Guide is to help you unpack, assemble, and install the system. This guide provides step-by-step setup and operating instructions along with detailed illustrations throughout the document. Below is a summary of the sections to follow:

Chapter 1: Getting Started covers information about the internal and external features as well as the system architecture and supported operating systems.

Chapter 2: System Features explains the main features of your system, including how to assemble it, identifying connectors and arranging your workspace.

Chapter 3: Maintaining and Cleaning Your System explains how to perform routine maintenance and cleaning on your system.

We recommend you take time to read through the manual before using the system. If you encounter a problem, refer to the handy troubleshooting section in this guide.

Conventions used in this guide

Throughout this booklet, you will see the following conventions:

Convention	Description
ENTER	Keyboard key names are printed in small capitals.
CTRL+ALT+DEL	A plus sign indicates that the keys must be pressed simultaneously.
Setup	Commands to be entered, options to select, and messages that appear on your monitor are printed in bold.
User's Guide	Names of publications and files are printed in italic.
Important!	An important informs you of special circumstances.
Caution!	A caution warns you of possible damage to equipment or loss of data.
Warning!	A warning indicates the possibility of personal injury.

Important safety instructions

Observe the following guidelines when performing any work on your system:

- Follow all instructions marked on this product and in the documentation.
- Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- Do not use this product near water. Do not spill liquid on or into the product.
- Do not place this product on an unstable surface.
- Openings in the system cabinet are provided for ventilation. Do not block or cover these openings. Do not place this product near or upon a radiator or heat register.
- Use only the power source indicated on the power supply. If you are not certain about your power source, consult your reseller or the local power company.
- This product is equipped with a 3-wire grounding plug (a plug with a grounding pin). This plug will only fit into a grounded power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace the outlet.
- Do not walk on the power cord or allow anything to rest on it.
- If you use an extension cord with this system, make sure the total ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating. Also, the total ampere requirements for all products plugged into the wall outlet must not exceed 15 amperes.
- Never insert objects of any kind into the system ventilation slots.
- Do not attempt to service the system yourself except as explained elsewhere in the manual. Adjust only those controls covered in the instructions. Opening or removing covers marked “Do Not Remove” may expose you to dangerous voltages or other risks. Refer all servicing of those compartments to qualified service personnel.

- Under any of the following conditions, unplug the system from the wall outlet and refer servicing to qualified personnel:
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not operate properly when the operating instructions are followed.
  - The system was dropped, or the cabinet is damaged.
  - The product exhibits a distinct change in performance.

Important!

The system power cord serves as the main disconnect for the computer. The wall outlet must be easily accessible by the operator.

1

Getting Started

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Before you begin

Congratulations on your purchase. With the arrival of your new system, you are probably eager to assemble the computer and have it operating. This section helps you:

- Assemble the system
- Connect the monitor and keyboard
- Start up the system

Carefully read and follow these instructions to ensure that your system operates correctly.

Assembling your system

- Prepare a clean, flat, and firm surface for your computer. Allow at least three inches at the rear of the chassis for cabling and air circulation.
- Protect your computer from extreme temperature and humidity. Do not expose your computer to direct sunlight, heater ducts, and other heat-generating objects.
- Keep your system away from equipment that generates magnetic fields. Even a telephone placed too closely to the system may cause interference.
- Protect your system against AC power spikes by using a 3-prong, 115-V or 230-V (depending on the voltage supplied in your locality) power cord, and an AC surge control power strip. The system includes a TAC400 power supply. The power supply ships with a single hot-swappable module and can support up to two modules. The system requires a separate wall outlet for each power supply module.

Inspecting the contents

Unpack the carton and inspect the contents. Standard systems include the following items:

- Server
- Power cables
- User's guide
- Maintaining and troubleshooting guide
- Utilities
- Enhanced keyboard

Check the packing list to ensure all equipment and associated manuals are included in your shipment. Inspect everything carefully.

★ *Important!*

Keep the product carton and foam packing, in case you have to ship the system.
If you return the system in different packaging, your warranty may be voided.

Setting up the server

Refer to Figure 1 and the following procedures when connecting optional peripherals to your system.

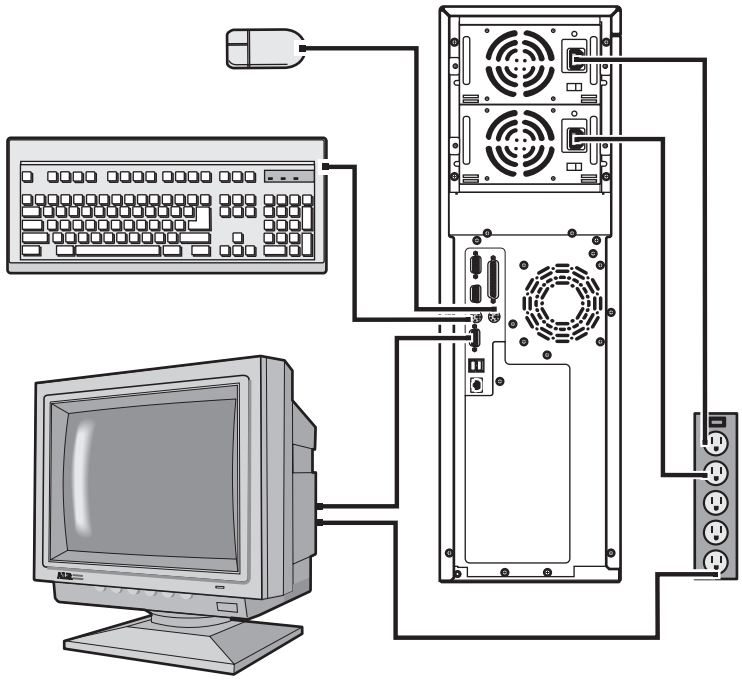

Figure 1: Connecting Peripherals

1. Connect the keyboard and mouse to their respective ports using the pictures on the server's rear cover as a guide.
2. Connect the monitor video cable to the video port. The location of the port may vary depending on whether you use the integrated video or a video card.
3. Connect the monitor power cable to an AC outlet or, preferably, a surge control outlet station.
4. Verify that the voltage selector switch on the power supply is set for the proper voltage (115V or 230V). If the system includes two hot-swap modules, each module has a voltage selector switch.

★ *Important!*

Shielded cables are required by the FCC.

5. Connect the power cable to the AC-In power socket on the power supply. If the system includes both hot-swappable modules, there will be an AC-In power socket on each module.

6. Connect the other end of the power cable(s) to an AC outlet.

Starting up the system

Warning!

For safety reasons, both upper and lower bezel doors must be closed and locked while the system is running.

Press the On/Off switch on the front panel to start the system. The green LED on the front panel lights.

If you turn off your system, you must wait at least ten seconds before you turn the system back on.

The system self-checks the memory even if the monitor is not connected. If the monitor is connected and on, the screen displays the start-up sequence.

- If more than one CPU is installed, the system displays which CPU it is currently testing.
- If any errors are encountered, your system displays them on the monitor.
- If a monitor is not connected or the system is unable to display an error, an error beep code sounds.

If the system encounters an error, it is most likely a nonfatal one, meaning the system will function until the error is corrected (usually through the BIOS Setup). In the rare case of a fatal error, see “Quick check” on page 6. If the information in this guide does not help you solve the problem, check your *Maintaining and Troubleshooting Guide* for instructions.

Important!

A delay in video may be caused by large memory configuration. Once the bootup sequence has completed, your display will return.

Quick check

Sometimes, the simplest things can cause trouble. To avoid unnecessary service calls, be sure you check over the basics before you call for support. If your system does not operate correctly, re-read the instructions for the procedure(s) you have performed. If an error occurs within an application, consult the documentation supplied with the software.

This section identifies solutions to common problems.

Looking things over

In any complex system, there is potential for a forgotten connection, a forgotten switch, or a loose connector. If you try to start up the server and it does not start up, perform the following checks:

- Is the power cord connected to the CPU system and an AC outlet?
- Is the AC outlet supplying power?
- If a power strip is used, is it switched on? Is the circuit breaker set?
- Does the voltage selection switch on the system's power supply reflect the proper voltage?

Verifying your configuration

If your system is not operating correctly, the BIOS may contain an invalid configuration parameter. Enter the BIOS program and check your configuration settings. The BIOS Setup utility, configuration fields, and the options for those fields are provided in the *Maintaining and Troubleshooting Guide*.

Troubleshooting guidelines

As you troubleshoot your system, keep the following guidelines in mind:

- Never remove the system covers while the system is on.
- Do not attempt to open the monitor. It is extremely dangerous. Even if the monitor power is disconnected, stored energy in the monitor's components can cause a painful or harmful shock.
- If a peripheral such as the keyboard, mouse, drive, or printer does not work, ensure that all connections are secure.
- If the screen displays an error message, write it down word-for-word. You may be asked about it when calling Technical Support.
- Only qualified personnel should open the system for maintenance.
- If you are qualified to maintain the system yourself, make certain you are properly grounded before opening the system chassis.

★ *Important!*

If the CMOS has been corrupted by a power outage or an interrupted flash update and you plug the system into a power outlet, it will power up immediately. This is normal.

System Features

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Basic features

- Intel Pentium® II processor (speed depends on the model)
- Autodetection of 66/100-MHz memory bus for all processor speeds to accommodate processors using either memory bus speed
- SMP design supporting up to two processor modules
- Intel MP Specification V1.1 and 1.4 compliant
- 32-bit PCI and 16-bit ISA bus master
- 64-bit processor and memory data path
- Extended PCI-to-PCI bridge support
- 64-MB Error Checking and Correcting (ECC) memory, expandable to 1-GB using ECC 72-bit SDRAM DIMMs
- Integrated 2-MB DRAM PCI Graphics (Cirrus Logic GD54M30)
- Eight expansion slots: five PCI, one shared PCI/RAIDport, one shared PCI/ISA, and one ISA slot
- Integrated PCI Ultra2 SCSI (Adaptec 7890) with two 68-pin connectors, dual-channel Ultra-DMA PCI IDE interface, and floppy controller supporting 1.44 MB and 2.88 MB formats.
- RAIDport ready: the shared PCI/RAIDport slot supports the addition of a RAIDport card to provide RAID capability.
- Low voltage differential (LVD) support for SCSI devices. LVD SCSI allows faster disk access and greater data integrity
- Power supply unit that supports dual 400 W redundant power supply modules with hot swap capability. The system ships with a single module. If you install the optional second module, the power supply supports load sharing and N+1 fault tolerance.
- Phoenix upgradable Flash BIOS, Year 2000 Ready
- The system is equipped with InforManager™ (IFM), a special feature consisting of both hardware and software designed to monitor and report the operating status of the system and its devices: CPUs, power supplies, RAM, ambient temperatures, voltages, and fan operation. For further information about the InforManager™, refer to the *InforManager™ User's Guide.*

Front panel

The front panel of the system is equipped with switches, LEDs, and drive bays (see Figure 2.)

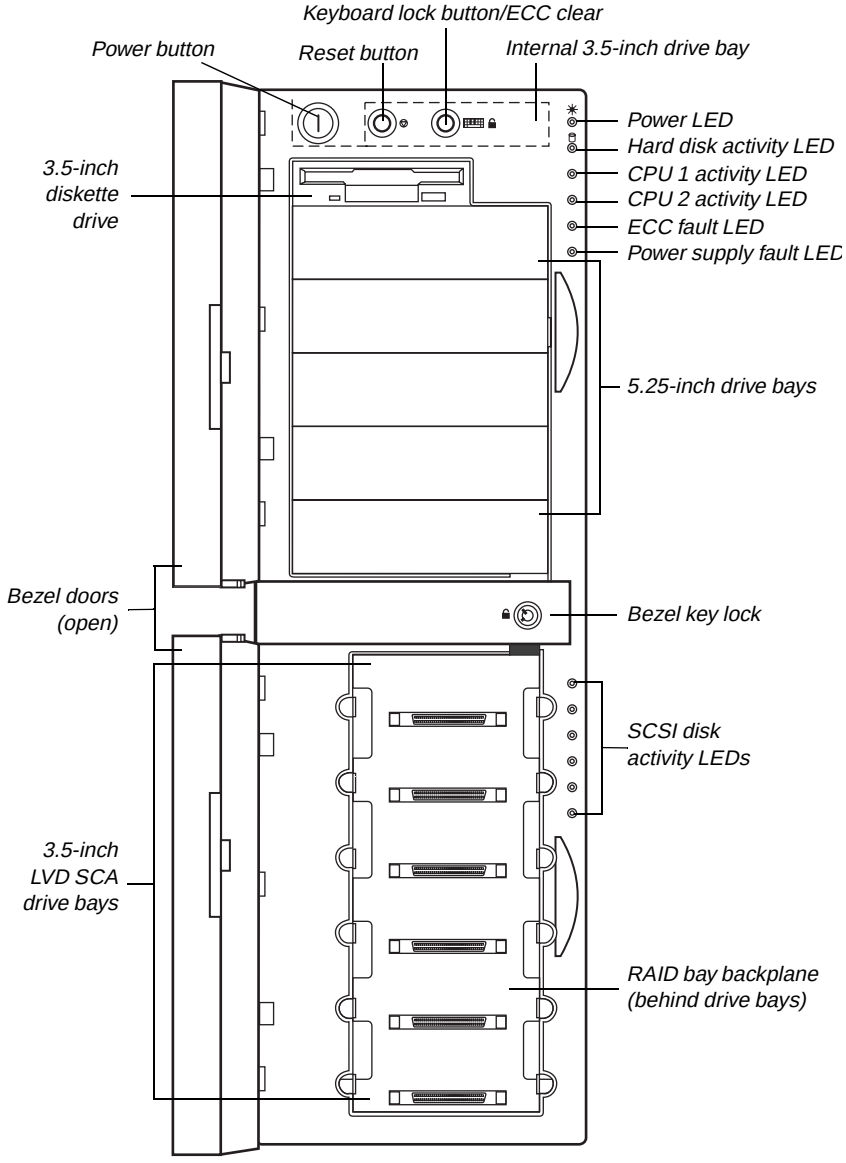

Figure 2: Front Panel

Buttons

The following table shows the front panel buttons and their functions. See Figure 2 on page 11 for the locations of the buttons.

Switch	Function
Power	Turns the system ON or OFF.
Reset	Allows you to reset the system without having to power it off and then on again
Keyboard lock	Enables or disables the keyboard functions and clears the error flag after an ECC error. Pressing this button does not correct the error condition. If the error condition has not been corrected, the LED will light again.

Internal 3.5-inch drive bay

The system includes an internal 3.5-inch drive bay to accommodate a 3.5-inch IDE hard drive or other 3.5-inch device that does not need to be accessed from outside the system.

LED indicators

The following table shows the front panel indicator LEDs and their functions. See Figure 2 on page 11 for the locations of the indicator LEDs.

LED	Meaning When Lit
Power	The system is on.
Hard disk controller activity	The hard disk is being accessed.
P1 activity	The first CPU is active.
P2 activity	The second CPU is active.
ECC fault	A memory error has been detected.
Power supply fault	One of the power supplies has failed.

LED	Meaning When Lit
Hard disk activity	The corresponding LVD SCA drive is being accessed.
Power	The system is on.

5.25-inch drive bays

The 5.25-inch drive bays provide space for up to five 5.25-inch devices such as CD-ROM drives, 5.25-inch diskette drives, or tape drives.

Bezel doors and keylock

The top bezel door provides access to the power, reset, and keyboard inhibit switches, as well as the 3.5-inch diskette drive and the 5.25-inch drive bays. The lower bezel door provides access to the 3.5-inch low voltage differential (LVD) SCA drive bays. Both doors can be locked to prevent unauthorized access.

Warning!

Both upper and lower bezel doors must be closed and locked while the system is running.

RAID bay backplane

The RAID bay backplane supports connection of up to six 3.5-inch hot-swappable, LVD, SCA, SCSI hard drives. The backplane automatically sets SCSI ID numbers and provides termination. Settings allow you to divide the backplane into one or two channels and to connect a SCSI CD-ROM drive to the backplane as well.

3.5-Inch LVD SCA drive bays

The 3.5-inch LVD SCA drive bays allow you to install up to six 1- or 1.6-inch hot-swappable SCSI hard drives. The drives use a guide rail system that allows easy installation and removal. Cooling for the drive bays is provided by internal fans.

3.5-inch diskette drive

The standard system is equipped with one half-height 1.44-MB 3.5-inch diskette.

Rear panel

The rear panel of the system is equipped with I/O ports, connectors, and switches (see Figure 3).

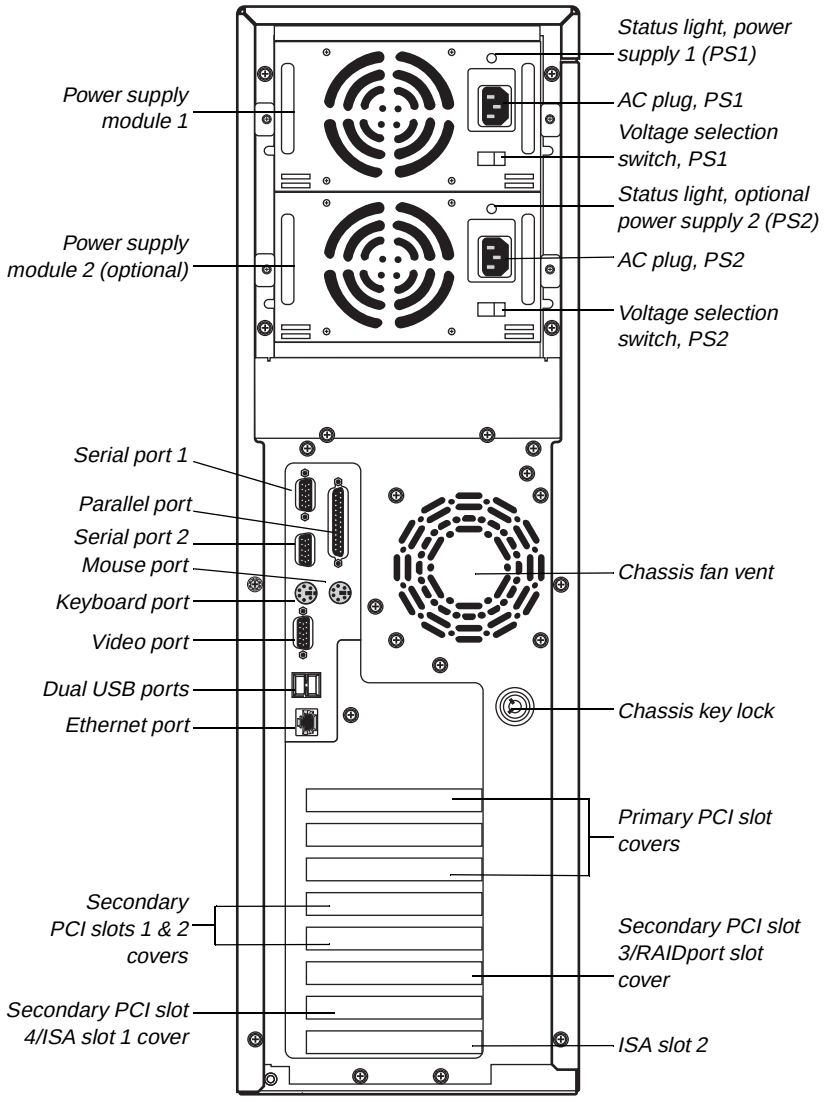

Figure 3: Rear Panel

Power supplies

The system supports two 400-Watt redundant power supply modules capable of load sharing. The standard configuration includes a single module. The second module can be purchased as an option and provides redundancy and hot-swap capabilities.

Power supply status lights

Each power supply module has a multi-color status light.

- Green indicates normal operating mode
- Amber indicates standby mode
- No light indicates the power supply module is not receiving power or has failed

Voltage selector switches

Located on the back of the power supply module, this switch must be set to the proper AC line voltage used in your locality (115VAC or 230VAC). If the optional second module is installed, there are two Voltage Selector Switches.

Caution!

The voltage selector switches are set at the factory. Changing them may result in severe damage to the server.

AC power-in connectors

This is a connector into the power supply that provides the electrical current to the system and its peripherals. Using the power cable supplied with the system, connect the power supply into a wall outlet. If the optional second module is installed, there are two AC Power-In connectors. If you use both modules, plug each power cable into a separate wall outlet, preferably on separate circuits.

Fans

The exhaust fans provide airflow through the system to keep the interior temperature to acceptable levels. Do not block this vent.

Chassis keylock

The chassis keylock allows you to secure the panels to the chassis to prevent unauthorized access to the system and its peripherals.

Expansion slot cover plates

These are cover plates for their corresponding expansion slots on the system board.

I/O ports

The following table shows the rear panel I/O ports and their descriptions. For the locations of the ports refer to Figure 3 on page 14.

Port	Definition
Serial ports 1 and 2	These are high speed serial ports that use the First-In-First-Out (FIFO) protocol. If you have a serial mouse, connect it to Serial Port 1 (COM1). Other serial devices such as serial printers or modems are also connected to these ports.
Parallel port	Parallel devices such as parallel printers and scanners can be connected to this port.
Mouse port	This port supports any mouse with a miniature circular DIN (mini-DIN) connector.
Keyboard port	This port supports any keyboard with a miniature circular DIN (mini-DIN) connector.
Video port	Connects your monitor to the video interface card.
Stacked dual USB ports	These ports support any USB compliant devices. USB keyboards and mice may not be compatible with power management functions.
Integrated LAN port	This port supports an RJ45 connector to your LAN. The LAN port has two small LEDs. These LEDs provide the following information: • The green LED lights when the integrated ethernet circuit detects a valid link to the network • The amber LED lights when the integrated ethernet circuit communicates at 100Mbps.

★ *Important!*

If your mouse has a mini-DIN connector, you must connect it to the mouse port.

Operating systems

★ *Important!*

The Pentium® II processor in this system is designed to support 32-bit operating systems and applications. To ensure optimum system performance, use only 32-bit programs on the system.

The system is 100% Intel MP Specification V1.1 or V1.4, BIOS-selectable compliant. The following operating systems support symmetrical multi-processing (SMP):

- Novell NetWare SMP 4.1 and 4.11
- SCO UNIX 3.2.4.2
- SCO UNIX ODT 3.0
- SCO UNIX Open Server 5.X
- UnixWare 2.01 and 2.1
- Solaris® 2.1
- IBM OS/2 SMP 3.0 Warp
- Microsoft Windows NT™ Server 3.51 and 4.0
- Microsoft Windows NT™ Workstation 3.51 and 4.0
- Microsoft Windows NT™ Server 4.0 Enterprise
- Microsoft Small Business Server (SBS)

★ *Important!*

SCO UNIX versions 3.2.4.2 and ODT 3.0 require both MPX 3.X and APIC Driver 1.X to support more than one processor.

Because each operating system operates differently, it is best to reference your software documentation for specific instructions on what to do after the system boots.

The following operating systems run on the system but do not support the system's multiprocessing capabilities:

- Microsoft Windows® 95
- NeXTStep OS 3.3
- Novell NetWare 3.1x and 4.x

If you are unsure whether or not your application supports SMP, contact the product manufacturer.

Maintaining and Cleaning Your System

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Maintaining your hard drive

Hard drives need regular maintenance because running the system software divides files, creates spaces between data, and otherwise decreases the hard drive's performance. Windows 95 and Windows NT provide maintenance tools that help prevent possible hard drive problems. The most important tools for hard drive maintenance are the programs ScanDisk (Windows 95 only), Check Disk (Windows NT only), and Disk Defragmenter (Windows 95 only).

Using ScanDisk

ScanDisk is a Windows 95 program that lets you check your hard disk for damaged areas and then repairs them. We suggest you scan your hard drive from at least once a week to once a month, depending on how often and how much you use your computer.

To use ScanDisk

1. Click on the **Start** button. Then click on **Programs**, then **Accessories**, then **System Tools**, and then **ScanDisk**.

   The ScanDisk window opens.

2. In the ScanDisk window, click on the drive you want to scan.

3. If you only want to check your files and folders for errors, select the **Standard** option button. If you want to do a more thorough scan for errors, select the **Thorough** option.

   Because the **Thorough** option takes more time than the **Standard** option, we recommend you normally use the **Standard** option and do a **Thorough** check at least once a month.

4. If you selected **Standard** and you want to change the settings ScanDisk uses when it checks files and folders, click on the **Advanced** button, select the options in the ScanDisk Advanced Options window, then click on the **OK** button to close the window.

If you selected **Thorough** and want to change the settings ScanDisk uses when it checks the disk's surface, click on the **Options** button, select the options from the Surface Scan Options window, then click on the **OK** button to close the window.

5. If you want ScanDisk to automatically fix any errors it finds, select the **Automatically fix errors** option in the ScanDisk window.
6. Click on the **Start** button in the ScanDisk window.

   When the scan is complete, the ScanDisk Results window opens giving you details of the scanning operation.
7. If you want to scan another drive, click on the **Close** button to return to the ScanDisk window, select another drive, then go to Step 6.
8. When you are finished using ScanDisk, click on **Close**.

Using Check Disk

Windows NT provides the Check Disk utility to maintain the hard drive. Check disk enables you to check the drive for errors, fix file system errors, and attempt to recover bad sectors on the drive.

Use Check Disk from once a week to once a month, depending on how often you use your computer. Also use Check Disk whenever you have any hard drive problems.

To use Check Disk

1. Right-click **Start** and then click **Explore**.
2. In the Windows NT Explorer window, right-click the drive you want to check. You can only check one drive at a time.
3. Click **Properties**.
4. Click the **Tools** tab.
5. Click **Check Now** in the Error-checking dialog box.

6. Check **Scan for and attempt recovery of bad sectors** to scan the entire hard drive.

7. Click **Start**. If the scan finds bad sectors, a screen message notifies you.

Using Disk Defragmenter

The Disk Defragmenter program that comes with Windows 95 helps maintain the integrity of your hard drive by rearranging files so that unused space on your hard drive is not scattered around the drive, but is contained in one contiguous area on the disk. You may notice, after running Disk Defragmenter, that your programs run a little faster and more efficiently. That is because the hard drive head can go directly to the data it needs instead of skipping around to different places on the disk to find pieces of data.

We suggest you run Disk Defragmenter at least once a week to once a month, depending on how much you use your system.

To run Disk Defragmenter

1. Click on the **Start** button, then follow the popup menus through **Programs**, then **Accessories**, and then **System Tools**. Then select **Disk Defragmenter**.

   A dialog box opens asking you to select a drive to defragment.

2. Select the drive from the pull-down menu, then click **OK**.

   A dialog box opens showing the progress of the defragmentation. When defragmentation is complete, a dialog box opens and asks you if you want to quit the Disk Defragmenter program.

3. If you are finished defragmenting the drives in your system, click **Yes**.

   If you have more drives to defragment, click **No** and return to Step 2.

Protecting against viruses

A virus is a program written with malicious intent for the sole purpose of creating havoc in a computer system. It attaches itself to executable files or boot sectors, so it can replicate and spread. Some viruses may only cause your system to beep or display messages or images on the screen. Other viruses are highly destructive and corrupt or erase the contents of your files or diskettes. To be safe, never assume any virus is harmless.

Viruses spread through direct contact with executable programs or boot sectors. Diskettes used in a contaminated system can get a virus and transfer the virus when used in another system. A virus can also spread through programs downloaded from bulletin boards or the Internet.

To protect your system against viruses

- Obtain an anti-virus program and scan the system regularly.
- Make backup copies of all files and write-protect the diskettes.
- Obtain all software from reputable sources and always scan new software for any viruses prior to installing files.

If you suspect your system has been infected, find and remove the viruses immediately using an anti-virus program. Next, turn off your system and leave it off for at least 15 seconds before turning it back on. This is the only way to ensure the virus does not remain in your system RAM.

Cleaning your system

Your system and its components need to be cleaned occasionally. Some programs that help maintain the integrity of the hard drives in your system come as part of the Windows 95 and Windows NT operating systems. The following sections contain information about caring for the various parts of your system.

Cleaning the mouse

If the mouse pointer on the screen moves erratically when you move the mouse, dirt is probably on the rollers inside the mouse.

To clean the mouse

1. Shut down the system.
2. Turn your mouse upside down and remove the mouse ball cover.
3. Cup your hand under the mouse, then turn your mouse right-side up. The gray mouse-ball should drop into your hand. If it doesn't, gently shake the mouse until the ball drops out of the socket.
4. Once the mouse ball is free, use adhesive tape to pick up any dust or lint on its surface and wipe away dirt or lint inside the mouse-ball socket. You can also blow into the socket to remove dirt and lint. If foreign matter is trapped inside the socket or on the rollers, use a cotton swab dipped in isopropyl alcohol to loosen it. Allow surfaces to dry completely after cleaning.
5. Return the mouse ball to the socket and replace the cover, then restart the system.

Cleaning the keyboard

Occasionally you should clean the keyboard to free it of dust and lint particles trapped under the keys. The easiest way to do this is to blow trapped dirt from under the keys using an aerosol can of air with a narrow, straw-like extension.

If you spill liquid on the keyboard, shut down the computer and disconnect the keyboard. Turn the keyboard upside down to allow the liquid to drain out overnight before trying to use it again. If it fails to work after draining, contact Technical Support.

Cleaning the monitor screen

Use a soft cloth and window cleaner to clean the monitor screen. Squirt a little cleaner on the cloth (never directly on the screen), and wipe the screen with the cloth.

Cleaning the computer and monitor cases

Always shut down the system and other peripherals before cleaning any components.

Use a damp, lint-free cloth to clean the computer case, monitor case, keyboard, speakers, and other parts of your system. Avoid abrasive or solvent cleaners because they can damage the finish on your components.

Appendix

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Acronyms and abbreviations

AC - Alternating current

ACPI - Advanced Configuration & Power Interface

APIC - Advanced programmable interrupt controller

ASCII - American standard code for information interchange

ASIC - Application specific integrated circuit

ATAPI - AT advanced peripheral interface

BIOS - Basic input/output system

BIST - Basic integrity self-test

CD - Compact disc

CD-ROM - Compact disc, read-only memory

CHS - Cylinder, head, sector

CMOS - Complementary metal-oxide semiconductor

CPU - Central processing unit

DBE - Double bit errors

DIMM - Dual inline memory module

DMA - Direct memory access

DMI - Desktop management interface

DRAM - Dynamic random access memory

ECC - Error correcting code

ECP - Enhanced capabilities port

EDO - Extended data output

EMC - Electro-magnetic compatibility

EMI - Electro-magnetic interference

EPP - Expanded parallel port

ESD - Electro-static discharge

FAT - File allocation table

GB - Gigabyte

IDE - Integrated drive electronics

I/O - Input/output

IRQ - Interrupt request line

ISA - Industry standard architecture

KB - Kilobyte

LAN - Local area network

LBA - Logical block addressing

LED - Light-emitting diode

LVD - Low voltage differential

MB - Megabyte

MBE - Multiple bit error

Mbps - Megabits per second

MIDI - Musical instrument digital interface

MHz - Megahertz

MS-DOS - Microsoft disk operating system

NMI - Non-maskable interrupt

NTFS - NT file system

NVRAM - Non-volatile random-access memory

OS - Operating system

PCI - Peripheral component interconnect

PIC - Programmable interrupt controller

PIO - Paged input/output

PnP - Plug and play

POST - Power-on self-test

PS/2 - Personal System/2

RAID - Redundant array of inexpensive drives

RAM - Random-access memory

RMA - Return material authorization

ROM - Read-only memory

rpm - Revolutions per minute

RTC - Real-time clock

SBE - Single bit error

SCA - Single connector attachment

SCI - Signal control interrupt

SCSI - Small computer system interface

SDRAM - Synchronous dynamic random access memory

SE - Single-ended

SEC - Single edge contact

SMI - System management interrupt

SMM - Server management module

SMP - Symmetrical multiple processor

SVGA - Super video graphics array

TCP/IP - Transmission control protocol/Internet protocol

UPS - Uninterruptable power supply

USB - Universal serial bus

V - Volt

VAC - Volts alternating current

VGA - Video graphics array

VRM - Voltage regulator module

W - Watt

Terms and definitions

This list of terms should help you get acquainted with terms used in your computer's documentation and in your system software.

Applications - Software installed on your system. Sometimes called *programs*.

BIOS - Basic input/output system. The BIOS is software that is independent of any operating system. It enables the computer to communicate with the monitor, keyboard, and other peripheral devices without using programs on the hard disk.

The BIOS on your computer is flash BIOS, which means that is has been recorded on a memory chip that can be updated if needed.

Boot - To load the first software program (usually the operating system) that starts your computer. To perform a cold (or hard) boot, you turn the computer on when it is off. To perform a warm (or soft) boot, you reset the computer when it is already turned on.

Boot disk - A disk containing operating system programs required to start your computer. A boot disk can be a diskette, hard drive, or CD.

Byte - The basic unit of measure for computer memory. A character, such as a letter of the alphabet, uses one byte of memory. Each byte is made up of eight bits. Computer memory is often measured in kilobytes (1,024 bytes) or megabytes (1,048,576 bytes).

Cache memory - Cache is very fast memory that can be located in the processor. Cache reduces the average time required for the processor to get the data it needs from the main memory by storing recently accessed data in the cache.

CMOS memory - Complementary metal oxide semiconductor memory. CMOS memory is memory that is retained even when the computer is turned off. The Setup program settings and other parameters are maintained in CMOS memory.

Default - The option that the software or system uses when you have not made a choice yourself.

Disc - A compact disc (CD).

Disk - The device used by the computer to store and retrieve information. Disk can refer to a diskette or a hard disk.

Diskette - A removable disk, also called a floppy.

Hard drive - The drive installed inside your computer that stores all your system and data files. Depending on its configuration, the computer may have more than one hard drive. Each drive is assigned its own drive letter. If you have only one drive, its drive letter is C, and it is often called "the C drive."

I/O - Input/output. Refers to devices, such as printers, whose purpose is to enter data into a computer or extract data from a computer. An I/O device is accessed through an I/O address: a location in memory reserved for the device to exchange information between itself and the rest of the computer.

IRQ - Interrupt request line. The IRQ is a hardware line that a device uses to signal the processor when the device needs the processor's services. The number of IRQs is limited by industry standards.

Operating system - A program that supervises the computer's operation, including handling I/O, networking and connectivity, and device drivers.

Path - A sequence of information that directs the system to the file it needs. For example, **c:\windows\bubbles.bmp** is the path to a graphics file on your system. The **c:** tells the system it is on the C hard drive, the **\windows** tells the system it is in the windows folder, and **bubbles.bmp** is the file.

Pixel - A pixel is an individual dot in a graphic displayed on your computer. Pixels are so close together that they look as though they are connected.

POST - Power-on self-test. POST tests your computer's components whenever you turn on the computer.

Programs - Software installed on your system. Programs are sometimes called *applications*.

RAM - Random access memory. RAM is the computer's system memory. You can write to and read from RAM. Information stored in RAM is temporary and is erased when the computer is turned off.

Refresh rate - The refresh rate is the rate at which the image on the monitor screen is rewritten to the screen. A fast refresh rate helps keep the image from flickering.

Resolution - The resolution is the sharpness or clarity of the image on the monitor screen. Resolution is measured by the number of pixels the screen can display. For example, a resolution of 800x600 means that the screen can display 800 pixels in a row and can display 600 rows. The more pixels displayed, the higher the resolution and the clearer the images.

ROM - Read-only memory. Permanent computer memory dedicated to a particular function. For example, the instructions for starting the computer when you first turn on power are contained in ROM. You cannot write to ROM.

Regulatory compliance statements

FCC Notice

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This equipment has been tested and found to comply with the limits of a Class A digital device. The accessories associated with this equipment are as follows:

- Shielded video cable
- Shielded power cord

These accessories are required to be used in order to ensure compliance with FCC rules.

American Users

Caution!

The Federal Communications Commission warns users that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada Notice

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry CanadaLe présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Canadian Users:

Attention!

Couper le courant avant l'entretien.

CE Notice

European Users:

This Information Technology Equipment has been tested and found to comply with the following European directives:

[i]EMC Directive 89/336/EEC amending directive 92/31/EEC & 93/68/EEC as per

-EN 50081-1:1992 according to

EN 55022:1995 Class A

EN 61000-3-2:1995 or EN 60555-2:1986

EN 61000-3-3: 1995

-EN50082-1:1992 according to

EN 61000-4-2:1995 or IEC 801-2:1984

ENV 50140:1994 or IEC 801-3:1984

EN 61000-4-4:1988 or IEC 801-4:1998

[ii]Low Voltage Directive (Safety) 73/23/EEC as per EN 60950: 1992

Japanese Users:

VCCI Notice

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective action.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Australia/New Zealand Notice

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to the Australian/New Zealand standard AS/NZS 3548 set out by the Spectrum Management Agency.

Caution!

Disconnect power before servicing.

Australian and New Zealand Users:

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